A Research Proposal

On

Effect of Yogic and Recreational Activities for Improving Maladaptive and Distressed Behaviour of Autistic Children.

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Introduction of the problem

Autism is a lifelong developmental disorder that affects an individual's ability to interact with the world around them. Individuals with autism have difficulties making friends and participating in day to day social interactions. They often have restricted interests and behavioural patterns, and find comfort in routine and repetition. It is a spectrum disorder, autism affects children in different ways, and no two autistic children are exactly alike. This makes things very confusing for parents and societies. Parents are unable to understand that what is best for their child, as signs of autism vary greatly. There are currently no medical tests which can diagnose autism. Signs of autism vary from individual to individual. Symptoms of autism appear by age three (American Psychiatric Association, 2000). Diagnosis is usually based on careful observation as well as information provided by parents and other caregivers on the child's behaviour, communication, social interaction, and developmental levels. Children with autism usually display impairments in social, behavioural, and communication skills. Autistics children having social difficulties including lack of eye contact, facial expressions, and social gestures, failure to develop peer relationships, typical impairment in the area of social interaction, lack of hearing capability, times and lacks responsiveness, resists cuddling, holding, and physical touch , appears unaware of others' emotions, retreats into his their own world and prefers to play alone. White, Keonig and Scahill (2006) studied that Social reciprocity deficits are a core feature of the autism spectrum disorders (ASD). This review summarizes the state of research in group-based social skills training programs for school-age children and adolescents with Autism spectrum disorder (ASD). All published studies of group social skills interventions between 1985 and 2006 were reviewed, as well as dissertations examining group based social skills intervention programs. To assess the state of the science, a template developed by an NIMH work group was applied to 14 identified studies. Based on this review, the empirical support for this approach is incomplete, but promising intervention strategies were identified.

Recommendations for the design of future treatment trials to guide clinical practice are offered. Communication difficulties like delayed language development or absence of speech (Rogers, et al, 2001) ,inability to start or sustain conversation, stereotyped or strange use of language, disney speak means repeats phrases from frequently watched cartoons or movies,

language regression i.e. loses previously acquired ability to say certain words or sentences, avoids eye contact when speaking, repetition of words or phrases, with little understanding to make sense of these words or use them in own speech, difficulty expressing own needs and often uses gestures rather than words Stanley et, al. (1997) studied Charts of 200 children who were diagnosed with autistic spectrum disorder were reviewed. The goal of the review was to reveal patterns in presenting symptoms, underlying processing difficulties, early development, and response to intervention in order to generate hypotheses for future studies. The charts suggests that a number of children with autistic spectrum diagnoses are, with an appropriate intervention program, capable of empathy, affective reciprocity, creative thinking, and healthy peer relationships; that an intervention approach that focuses on individual differences, developmental level, and affective interaction may be especially promising; and that there are different underlying processing patterns with a difficulty in connecting affect and sequencing capacities as a possible common denominator. It also suggests that there is an early marker, the difficulty in engaging in complex purposeful gestural communication, and that contrary to traditional beliefs, a significant number of children may have relatively better functioning in the first year with a regression in the second and third years. This review also suggests that difficulties with relating and intimacy are often secondary to underlying processing disturbances. Many of the children can become quite loving and caring, thoughtful and creative, suggesting a need to change the criteria for diagnosing these disorders. Behavioural Difficulties includes Restricted and repetitive behaviour, abnormally intense preoccupation with certain activities or areas of interest, obsessive or inappropriate attachment to certain objects, inflexible insistence on certain non-functional rituals or routines, and becomes distressed when routines or rituals are changed, Stereotyped and repetitive movements called stemming, e.g. hand flapping or rocking, Preoccupation with parts of objects, such as a fascination with the spinning wheel of a toy car, May be particularly sensitive to loud sounds, bright lights, or physical touch and textures. Michael et, al. (1996) examined the factor structure of restricted and repetitive behaviors (RRB) in children with autism. Factor extraction procedures of 12 items from the Autism Diagnostic Interview-Revised (ADI-R) were applied in 207 individuals with autism. Two interpretable factors were identified i.e. repetitive sensory motor actions and resistance to change. There was a significant negative correlation between an index of level of adaptive

functioning and Factor extraction procedures. Intra class correlations were not significant for either factor in a subset of families with two or more siblings with autism. No differences in scores were apparent for either factor when multiplex families and families containing only one affected individual with autism (singleton) were compared. RRB in autism is represented by two distinct factors which reflect two separate groups within autism.

Autism is a lifelong-condition that affects the functioning of an individual and his or her family in all areas of life. It is found in all ethnic, racial, intellectual, and socioeconomic groups (Roger, et al, 2001). It is severe disorders of development, affecting between 5 and 30 children in 10,000 (Mays & Gillon, 1993; Rapin, 1997; Siegel, Pliner, Eschler, & Elliot, 1988; Stone, Hoffman, Lewis, & Ousley, 1994). Research is ongoing into the possible causes of ASD, such as genetics/heredity, differences in biologic brain function (neuropathology). Nicolson et, al.(1994) found that autism is largely caused by genetic factors that lead to abnormal brain development. In this article author used the findings from genetic and brain-imaging studies of autism over the past 15 years and synthesize these findings as a guide for future research and the result that Genome scans and association studies have suggested potential genomic regions and genes, respectively, that involved in the etiology of autism, and there were some replications of these results. Similarly, the finding was that brain volume is exaggerated in autism and corpus callosum size was reduced. Prenatal factors, possible exposure to environmental toxins, viral infections, and immune deficiencies are also the possible causes of Autism. Another study also describe Shattuck et, al (2007) examined change prospectively in autism symptoms and maladaptive behaviors during a 4.5 year period in 241 adolescents and adults with an autism spectrum disorder who were 10–52 years old in the beginning of this study. Although many individuals' symptoms remained stable, a greater proportion of the sample experienced declines than increases in their level of autism symptoms and maladaptive behaviors, and there were significant improvements in mean levels of symptoms. Individuals with mental retardation had more autism symptoms and maladaptive behaviors than those without mental retardation, and they improved less over time. Compared to adolescents, older sample members (31 and older) had fewer maladaptive behaviors and experienced more improvement in these behaviors over time.

It is well known that children with Autistic Disorder (AD) often engage in maladaptive behaviours such as aggression, self-injurious behaviour, and stereotyped behaviour (Dominick, et al 2007), and they also gives the extra ordinary levels of stress in caregivers (e.g., Hastings, Kovshoff, Ward, degli Espinosa, Brown, & Remington, 2005). The purpose of this systematic review was to synthesize evidence from studies examining the effect of exercise interventions on stereotypic behaviours in children with autism spectrum disorder (ASD). Only exercise-related physical therapy (PT) interventions were included. A multifaceted search strategy identified studies published between 1980 and 2007. Quality was assessed using the American Academy of Cerebral Palsy and Developmental Medicine (AACPDM) Study Quality Scale, the Clinical Relevance Tool for Case Studies, and the Quality, Rigour or Evaluative Criteria tool. Seven studies (1982–2003) met our inclusion criteria; four of these used single-subject research designs, two were group studies, and one was a case study. Ages and behavioural characteristics of the children (N¼25) varied among the studies. Levels of evidence ranged from II to V . Study quality scores ranged from 2 to 5 (range: 0 to 7); mean ¼ 3.9, mode ¼ 5. Few studies in this area of PT practice have been published, and those identified scored low levels of rigour on the AACPDM criteria. Research suggests that exercise provides short-term reductions of stereotypic behaviours in children with ASD. Future research with stronger evidence levels, greater rigour, and longer-term outcome assessment is required to determine specific exercise parameters.

The presence of maladaptive behaviours also places a child at a heightened risk for social exclusion and disturbs the family of autistic. Weiss et, al (2010) evaluated the usefulness of the Maladaptive Behavior Domain of the Vineland Adaptive Behaviour Scales-II in assessing maladaptive behaviour in children with autism. In this study sample was composed of 117 children with autism. Scores from the Maladaptive Behavior Domain were examined in relation to autism severity, cognitive ability, age, gender, and adaptive skills, all of which have been found to be related to maladaptive behaviour. Another study shows that there no change occur in the maladaptive behaviour with age. Ando and Yoshimura (1993) this study investigated the effect of age on communication and maladaptive behavior in autistic and mentally retarded children. Forty-seven autistic and 128 mentally retarded children in a special school served as subjects. The cross-sectional method was used to compare junior and senior groups, and ratings on communication skills and maladaptive behaviors were obtained

from teachers. Research revealed that the skills of comprehension and conversation in autistic children improved significantly with age, and speech improved somewhat. In spite of this improvement in communication skills, maladaptive behaviors in the autistic children other than hyperactivity did not change significantly with age. Withdrawal improved significantly with age in the mentally retarded children but not in the autistic children.

The term autism refers to a group of disorders known as Autism Spectrum Disorder (ASD). ASD is described as impairment in one or more of the following three categories: reciprocal social interaction, communication, and specific pattern of behaviors, interest, and activities. For any of these impairments, the child has the potential to display distressed behaviors (Biglan,1991). Distressed behaviors can include verbal outburst, self stimulatory behaviors, aggression, etc. and various other behaviors of concerns. Distressed behaviors, such as hand flapping, appear to form a functional response to stimuli this response often negatively impacts others. Behavior that is commonly labeled as indicating distress may have an important function in certain clinical problems. Evidence suggests that distressed behavior is displayed more frequently by persons who are depressed or experiencing chronic pain. Nader et, al. (2004) The findings demonstrate that children with autism display a significant behavioral reaction in response to a painful stimulus. For this study the researcher was systematically described Pain reactions to the invasive procedure of venepuncture were videotaped, and compared with 21 children with autism (3-7 years old) and 22 nonimpaired children, the latter providing a chronological age and gender equivalent comparison group. Parents provided observer reports of pain, and facial activity was used as an objective behavioral measure of pain. The children with autism displayed a significant facial pain reaction in response to the venepuncture procedure Such behavior includes nonverbal facial expressions and body postures which are typically labeled as sad, and verbal responses involving self-denigration or complaints. Such behaviors appear to form a functional response class which has a unique impact on others. The behavior appears to be more likely among persons who are receiving aversive stimulation. Recipients of distressed behavior are more likely to experience negative emotion, yet be solicitous toward the person who displays distressed behavior. Under circumstances where distressed behavior is unsuccessful in reducing aversive stimulation, the behavior may be shaped and maintained by the fact that it temporarily reduces the probability of others behaving aggressively toward the person

displaying distress. Thus, the development of a pattern of high rates of distressed behavior that characterizes clinically depressed persons and persons in chronic pain may be partly a result of the unique social contingencies that surround this behavior.

Physical activity is vital for a healthy lifestyle for children with and without disabilities (Huettig & O'Connor, 1999). Physical activity offers a variety of benefits for individuals with autism. Moderate aerobic activity, children with autism experience increases in attention span, on-task behavior, and level of correct responding (Rosenthal-Malek & Mitchell, 1997). A physical activity-based program is easy to implement and effective in controlling many types of inappropriate behaviors associated with autism (Allison, Basile, & MacDonald, 1991; Elliott, Dobbin, Rose, & Soper, 1994). Christopher Petrus et, al. (2008) the purpose of this study was to synthesize evidence from studies examine the effect of exercise interventions on stereotypic behaviours in children with autism spectrum Disorder (ASD). Researcher used only exercise related physical therapy(PT) interventions, a multifaceted search strategy identified studies published between 1980 and 2007.Quality was assessed by using the American Academy of Cerebral Palsy and Developmental Medicines (AACPDM) study quality scale, the clinical relevance tool for case studies, and the qualities, riggour or evaluating criteria tool. The result showed that exercise provides short term reduction of stereotypic behaviours in children with ASD. Sangeetha and Zehari (2009) this pilot study was done to lay the ground work a full scale study to determine the effects of physical exercise on disabled teen with autism. Six subjects participated in the program. Three males and three females with ages rating from 13yrs to 16yrs having high level of stereotypical behavior like spinning, screaming, banging and biting themselves, short attention span and changes in their emotional states. The one year program including physiotherapy session twice a week for 45 minutes, routine exercise i.e. walking on the treadmill for 15 minutes at four km/hr to five km/hr speed, jumping on the trampoline for five minutes to seven minutes, forward bending exercise 50 to 100 times, and bouncing on the physio ball. Each activity was given specific time to complete. The initial assessments were done using the Behaviour Assessment checklist. The preliminary observations showed that the participants enjoyed doing the exercises. Most of them were calm and relaxed after the exercise and have positive result. It was observed that self stimulus behavior was reduced, their attention had increased and they were able to manage their emotions. Russell et, al.(2010) this study involving

exercise and individual with autism (ASD) were reviewed. Systematic search procedure identified 18 studies meeting predetermined inclusion criteria. These studies were evaluated in terms of participant's characteristics, type of exercise, procedure used to increase exercise, outcomes and research methodology. Across the corpus of studies, exercise was implemented with 64 participants with ASD aged 30-41 years. A Varity of exercise activities were employed (e.g. jogging, weight training, bike riding). Fallowing the exercise interventions decrases in stereotypy, aggression, off-task behavior and elopement were reported. Fatigue was not likely the cause of decreases in maladaptive behavior because on task behaviour academic responding and appropriate motor behavior (e.g. playing catch) increased fallowing physical exercise. Results suggest that programs for individuas with ASD benefit from including components designed to incorporate regular and specific types of physical activity. Children with autism experience initial difficulties in physical activity programs because of inability to cope with the variety of auditory, visual, and tactile stimuli in wide-open spaces This inability to cope demonstrated by various behaviors, such as over sensitivity to stimuli (i.e., outbursts, pacing, hand flapping, toe walking); deficits in speech, language, and cognitive capacities; desire to avoid changes in routines; and difficulties transferring lessons from one setting to another. Children with autism may also experience deficits in interpersonal relationships, not seeking or readily accepting affection, avoiding play with peers or participation in physical activities, and avoiding eye contact. Exhibiting self-stimulatory or stereotypic behaviours or being unable to relate normally to other people and situations are also typical of young children with autism (American Psychiatric Association, 1994; Gillberg, 1990; Tsai, 1998). In addition, children with autism may possess low levels of physical fitness (Auxter, Pyfer, & Huettig, 1997). Children with autistic spectrum disorders (ASD) may be at risk for being physically inactive because characteristics of the disability interfere with successful participation in traditional forms of physical activity. There are several broad areas of motor skill development essential for participating daily life and several physical activities for autistic children. These areas include body awareness, motor planning, bilateral motor integration, balance skills, and fine motor control (Kurtz, 2008). Meghan et, al (2011) this study describes the gross and fine motor skills of a cross-sectional group of 162 children with ASD between the age of 12 and 36 months, as well as a subset of 58 children fallowed longitudinally. Gross motor and fine motor age equivalent

scores were obtained for all children. A ‘motor difference’ variable was calculated for each child’s gross and fine motor skills by taking the absolute difference of the children’s age equivalent motor score and their respective chronological age. In study 1 (the cross sectional analysis), ANCOVA (co-varied for non verbal problem solving) revealed significant group differences in the gross motor and fine motor age difference variables. Post-hoc analysis revealed that gross motor and fine motor differences became significantly greater with each 6-month period of chronological age. In study 2,58 children were measured twice, an average of 12 month apart. Results indicate that the gross motor and fine motor difference scores significantly increased between the first and second measurements.

Children without disabilities acquire a majority of their physical activity during transportation (i.e., walking to school), informal play (i.e., unstructured neighborhood play), and formal play (i.e., competitive sports; Fox & Riddoch, 2000). Recreation and yoga helps not only normal individual but also disabled like autistic. It is very necessary to give more time to them to recreate them and yoga helps to generate natural power to them for fighting against maladaptive and distress behaviour of them and also fulfill the need of physical activity

Aquatics activities also a part of physical activity are a fun and enjoyable experience that have many physical, psycho social, cognitive, and recreational benefits. Research continues to support the concept that water is the ideal medium in which to exercise or rehabilitate the body. Water activities provide autistic children with proprioceptive and tactile input. Children with Autism have significant sensory difficulties, and are very distractible. These children over or under react to stimuli in their environment and have very strong reactions to certain textures. The warm water provides a safe and supported environment, which not only supports the children, but also provides them with hydrostatic pressure that surrounds their body in the water. This pressure actually soothes and calms the children, providing the necessary sensory input they crave. Killian, Joyce- Petrovich, Menna, and Arena (1984) observed the responses of 37 children, 32 males and females, with ASD as they orientated to the pool and to beginner swimming skills. There was no pre test, just a post design with no controls. Participants attended a state developmental community recreation program. 33 had participated in weekly pool instruction at the developmental center pool, and 4 had not used

the pool. The Aquatic Orientation Checklist (AOC) was created and used as the main observational tool for this study. The AOC was designed to record water orientation and beginner swim skills, and a behavioural scale was used to rate performance on each AOC item. The AOC items consisted of four water orientation skills and two beginner swim skills that were taken from one of the American Red Cross (ARC) swim program in 1981. The four water orientation skilss were: walks to pool, touches water, enters pool, and sits or attains a horizontal position in pool. The two beginner swim skills were: blows bubbles and face submersion. The definitions on the behavioural ratings were: spontaneous, voluntary, demonstration, manipulations and objection. The result indicated that fine and gross motor test scores of each child were improved after water exercise intervention. This study showed that both water exercise training and special education interventions could be useful for developing motor performance of children with autism

All human beings at all time had some kind of recreation, such as music dance, social story interaction etc. John (2011) the purpose of this study was to examine the effects of a social story intervention on the social behaviors of an 8-years old girl with autism who attended an inclusive second-grade classroom. Several observations were used to establish a baseline level on her inappropriate social interactions that occurred during lunch (e.g. talking or singing to her, making noises). Fallowing baseline individualized social stories that addressed her inappropriate social interactions as well as appropriate alternative behaviours were introduced to the girl. Although data were somewhat variable, her inappropriate social interactions during lunch decreased by approximately 50% from the first day to the last day of the social story intervention. This study provides insight into the relationship between a social story intervention and social behaviours occurring between a student with autism and her peers.

Therefore recreation always excited and example of ancient man’s search for a work enjoyable through forms of recreation are evident. Egyptians indulged in hunting, spearing, wrestling and fencing. Kite flying provide pleasure to the Chinese and other Asiatic countries. Expression in movements was evident in early times in the form of dance. Clay modeling and basket weaving have excited since primitive times. In primitive times, the difference between work and play was not known. During the classical age the Athenians

were dedicated to the idea that to live was not enough to live well be their goal that is sound mind in sound body. Recreation is the expenditure of time with intent to gain some refreshment. It is a break from monotony and a diversion from the daily routine. It is a positive change from the stereotypical lifestyle and involves an active participation in some entertaining activity. Recreational activities involve an element of enjoyment and happiness obtained from engaging into something one likes. Different recreational activities serve as the sources of immense pleasure and provide relaxation to one's mind and body. The promotion of sports of all kinds occupies the forefront of recreational programs and no doubt that the disabled have the right to exercise all kinds of leisure, which called for psychologists, recreation and education. Recreation is the natural expression of human interest and need seeking satisfaction during leisure. These expressions take a variety of forms, but are motivated by the basic needs. Recreation is characterized by freedom of choice occurring in free time, and which and in which the satisfaction doing. Recreation connotes freedom, encourages self-expression, initiatives and self leadership.

Children with Autism have a strong need for recreation and they usually have a very hard time with any changes or transitions. These children have a strong need for rituals and routine and free time is very difficult for them to manage. The lifestyle of children with Autism includes many challenges due to their organizational and sequencing problems. Recreation has the same benefits for autistic and normal children. It is a natural teacher of skills an outer for emotions and inspiration for living. The difference with autistic children that they need these benefits more urgently. In normal play children pick up easily shifting and adopting their behaviour according to the situation. This adaptation is difficult for autistic child. These children don't know where to start, what comes next, or when a task is finished. This creates significant difficulties with organizing their day or their activity involvements. Recreational therapy interventions can help address many of these affected life areas. Recreational therapy can play a primary role in enhancing the quality of life and productivity of a child with Autism. According to the American Therapeutic Recreation Association, Recreational therapists offer individuals with disabilities the opportunity to resume normal life activities and to establish/re-establish skills for successful social integration. Dewey and Margaret (1995) referred the 200 questionnaire response from parents of autistic children describing recreational activities that appealed to their children

reported. Children preference were listed in the area of toys, collections, dance, music, games, sports helped children to released their tension, healthful living and inculcation of social skills. In another study Ibrahim and Ali (2010) identified the impact of the recreation sports on the social skills aspects of behavioral disorders, emotional disorders, emotional isolation and distribution of social emotions for a sample of autistic children, the researcher used the experimental method and the number of the core sample of 10 children from Sixth of October Club. The researchers used a social skills scale checklist prepared by Nadia Ibrahim Abdel-Kader. Results showed that using tennis racket has a positive impact on social skills and aspects of behavior in children with autism. The rate of change percentage between the two measures (pre and post) was 85.50% and the percentage change for the benefit of telemetric in the measurement of social skills, percentage rates of change between the two measures (pre and post) ranged between 20.67% and 25.27%. The change percentage recommended that using the software by using the recreational tennis developed the social skills and refined the behavioral manifestations in the sample of autistic children

Recreation is more than planned programs that happen in a park or gym. It can be any activity that helps a person to explore or relax or have fun. Recreation can happen in the home or in a community setting. The physical and emotional benefits of relaxation, social connections, and staying active in different ways important for creating a more fulfilling and joyful life. Families provide help to their autistic children through recreational opportunities. This come in the form of structured activities but can also be as informal as hanging out with a peer in a relaxed setting.

Yoga is becoming very popular in all parts of the world. Yoga literally means union. According to scriptures it is union with God, psychic power and with the mind. It is believed that there are infinite power and with the mind. It is believed that there are infinite powers lying hidden within the mind. Those powers remain unused so long as a man is not able to establish contact with that power. It is the science of yoga which enables man to use that power for whatever purpose individual like. Yoga essentially a science of the mind. The body also plays part but it is only to the extent that it is an adjustment of the mind (Goel 2007). Yoga is not an ancient myth buried in oblivion. It is the most valuable for the present. It is the essential need of locally and the culture of Tomorrow (Saraswati 1999). Yoga provides

many benefits to the Children with Autism Spectrum Disorders (ASD) it addresses both the physical and emotional symptoms of the disorder. The typical gross motor delay, low muscle tone and impaired coordination of ASD often result in low self-esteem and lack of confidence extend to other areas of life. Jennie et al (2010) this article provides an overview of the benefits of Yoga for children and adolescents diagnosed with autism spectrum disorder (ASD). According to this article Yoga improve focus and attention, sensory information processing, communication, self-regulation, and motor control. These skills generalize to other areas in life, ultimately helping those with ASD lead more balanced, healthy, socially integrated, and independent lives.

Yoga is an appropriate and enjoyable physical program which improves strength and tone in the muscles, develops balance, and increases body awareness. Even fine motor skills will be improved as yoga emphasizes being in tune with the entire body, hands and fingers, feet and toes. Children with ASD may also suffer from sensory issues including sensitivity to light, noise, taste, texture, or smell. Furthermore they repeat movements that seem uncontrollable (stim behaviours). Yoga help with these symptoms by soothing the nervous system and allowing pent-up energy to be released from the body in a non-competitive, peaceful manner. According to Radhakrishna (2010) Children with autism exhibit significant deficits in imitation skills, which impede the acquisition of more complex behavior and socialization. Parents and six children with ASD participated in a 10-month program of 5-weekly sessions and regular practice at home. Pre, mid and post treatment assessments included observers and parent ratings of children's imitation skills in tasks related to imitation skills such as gross motor actions, vocalization, complex imitation, oral facial movements and imitating breathing exercises. Improvement in children's imitation skills especially pointing to body postural and oral facial movements. Parents reported change in the play pattern of these children with toys, peers and objects at home.

Autistic children find yoga beneficial as it improves both their emotional and physical symptoms. Yoga meditation and breathing techniques helps in reducing stress, teach autistic children cope better, and give them a sense of calm acceptance. Children suffering from Attention Deficit Disorder learn listening skills and how to work more slowly with awareness. These children often have pent-up energy which can be released

peacefully.Regular practice of yoga and pranayama strengthens the nervous system by giving deep relaxation. Yoga also increases body awareness and concentration. Ehleringer et, al (2010) This article provides an overview of the benefits of Yoga for children and adolescents diagnosed with autism spectrum disorder (ASD).In this article author describe Yoga improves focus and attention, sensory information processing, communication, self-regulation, and motor control. These skills generalize to other areas in life, ultimately helping those with ASD lead more balanced, healthy, socially integrated, and independent lives. The article provides detailed advice based on the author's clinical experience about the structure a Yoga environment, work with ASD as well as the families and communities of students with ASD, and create lessons based on student's individual or group needs.

Autistic children suffer from dysfunction of sensory integration which makes them sensitive to sounds, sights or touch. They also become distracted easily, be impulsive and lack self control. Yoga definitely help them cope better with all these symptoms Some autistic children suffer from lack of motor skills, muscle tone and bad co-ordination. This affects their confidence and self esteem. Regular yoga practice tones the muscles and develops resilience, strength and balance. Yoga for autism also includes stories, rhymes, dance, music and massage which stimulate the children's emotional center in the brain. Yoga also improves the autistic children's motor skills by tuning their entire body. Goldberg et, al (2004) described that School is a stressful place, especially for those with special needs. According to the author Sitting still, paying attention, staying on task were not skills that came easily to anxious learners. There were few opportunities in most educational curricula to train students in the skills required for self-control and focusing the mind. Creative RelaxationSM is a Yoga-based program was designed to teach students to strengthen, stretch, and calm the body, quiet the mind, and control the breathing. The teaching principles of Creative Relaxation were as follows: make a sacred space, engage the student, provide tools for success, and create opportunities for independence. This article was demonstrate ways to apply these principles in an educational setting for regular and exceptional student education, based on the experience of the author as a consultant in the public school system since 1981. Anecdotal data and examples was given from the author's work with children in regular education, as well as with those with autism and related disabilities, emotional handicaps, ADHD, and learning disabilities, and with anxious learners. In addition, the author

collaborated with school professionals in a study to evaluate the effectiveness of a Yoga-based relaxation program for six children with autism over an eight-week period. Children with Autism Spectrum Disorders (ASD) was benefit from yoga since it addresses both the physical and emotional symptoms of the disorder. The typical gross motor delay, low muscle tone and impaired coordination of ASD often result in low self-esteem and lack of confidence which can extend to other areas of life. Yoga is an appropriate and enjoyable physical program which improves strength and tone in the muscles, develops balance, and increases body awareness. Even fine motor skills will be improved as yoga emphasizes being in tune with the entire body, hands and fingers, feet and toes. Children with ASD may also suffer from sensory issues including sensitivity to light, noise, taste, texture, or smell. Furthermore, they may repeat movements that seem uncontrollable (stim behaviours).Yoga can help with these symptoms by soothing the nervous system and allowing pent-up energy to be released from the body in a non-competitive, peaceful manner.

Significance of the problem

Autism is a developmental disorder that typically appears in the first three year of life. This disorder makes it difficult for children to communicate verbally and non-verbally, to socially interact with others and to themselves with outside world. Many children with autism, however also exhibit remarkable abilities in the areas of art, music and math (Sharma 2004, Bernard 1978).

The investigator witnessed volume of literature focusing on various dimension of autistic individual but it has been realized that a very few work has been done to know the effect of yogic exercise and recreational activities on autistic children behaviour. So in this respect the present investigator open a new dimension to explore while filled the dearth of literature

Yoga consists of physical postures and breathing exercises to connect the mind and body. It may help to bring the child with autism out of his or her shell and into the world of social interaction. Combination of Asana and Pranayama can strength then the child's nervous system, increase overall health and facilitate the development of body awareness and concentration. By establishing optimal physiological and psychological integrity yoga

therapy can help child with autism gain new motor, communication and social skills. The end result is an overall improvement in their quality of life

Recreation is activities and experience which produce feeling of enjoyment and satisfaction. Recreation can be particularly important for people with autism, drawing an opportunities to practice social skills, physical aptitude and increase motivation. The activities may help to increase self-confidence and may allow the autistic children to participate in sports activities.

In conclusion, behaviour of children with autism may be positively impacted through participating in yoga and recreational activities.

Statement of the Problem

An attempt will be made to examine the effect of yogic and recreational activities for improving maladaptive and distressed behaviour of autistic children.

Operational definitions of the terms used

Yogic Activities: Yogic activities as selected asana i.e Surya Namaskar, Ujjai Pranayama, Auloma Viloma, Halasana, Trikona Assana, Padam asana, Nauka asana, Satu asana, Ashwachalan asana, Titali asana, Balak asana and Purbotasana ..

Recreational Activities: The present study recognized activities performed by autistic children as their leisure time activities such as Blanket Volleyball, Bunker Hill, Bridge Ball, Cats In The Corner Chinese Soccer, Crab Soccer, Crazy Eights, Dice – 1000, Killer, Relay Card Game, Spoons, and Finger Nail Painting.

Maladaptive behaviour: In the present research maladaptive behaviour is the behaviour autistic children who have difficulty using language for socialization purposes, such as social interactions, establishing joint attention, and establishing social connections requesting an item, greeting a person, asking or answering questions, commenting, conversation, and expression of feelings all become difficult .

Distressed behaviour: Distressed behaviour includes nonverbal facial expressions and body postures which are typically labeled as sad and verbal responses involving self-denigration or complaints. Such behaviours appear to form a functional response class which has a unique

impact on others. Recipients of distressed behaviour are more likely to experience negative emotion, yet be solicitous toward the person who displays distressed behaviour

Objectives of the study

1. To find out the effect of yogic activities on maladaptive behaviour of autistic children individually as well as in group.

2. To analyze the effect of yogic activities on distressed behaviour on autistic children individually as well as in group.

3. To examine the effect of recreational activities on maladaptive behaviour of autistic children individually as well as in group.

4. To observe the effect of recreational activities on distress behaviour of autistic children individually as well as in group.

5. To investigate the interactional effect of yoga and recreational activities on maladaptive behaviour of autistic children individually as well as in group.

6. To gauge the interactional effect of yoga and recreational activities on distressed behaviour of autistic children individually as well as in group.

Hypotheses

1. There will be significant difference between pre and post test condition related to the maladaptive behaviour of autistic children practicing yoga.

2. There will be significant difference between pre and post test condition related to the distress behaviour of autistic children practicing yoga.

3. There will be significant difference between pre and post test condition related to the maladaptive behaviour of autistic children exposing recreational activities.

4. There will be significant difference between pre and post test condition related to the distress behaviour of autistic children exposing recreational activities.

5. There will be significant difference between pre and post test condition related to the maladaptive behaviour of autistic children practicing combined activities of yoga and Recreation.

6. There will be significant difference between pre and post test condition related to the distress behaviour of autistic children combined activities of yoga and Recreation.

Design of the study

The present study is an experimental research in which pre and post design will be used. It is a systematic and scientific approach to the present problem in which the researcher manipulates one or more variables, and measures changes on dependent variables i.e. Maladaptive and Distress behaviour of autistic children.

Subjects will exposed to four different environment that create four different group i.e. Group A, Group B, Group C and group D Before exposed to the training, subjects will be tested for their level of maladaptive and distress behaviour through check list. Training of selected programme will be given up to 24 weeks. After that post test will be applied.

Training Design

Group A

Group A will be received the training of selected asans and paranayama i.e. Surya Namaskar, Ujjai Pranayama, Auloma Viloma, Halasana, Trikona Assana, padam asana, nauka asana, satu asana, ashwachalan asana, Ntitali asana, balak asana, purbotasana and Marjari Asana.

Group B

Training of selected recreational activities i.e. Blanket Volleyball, Bunker Hill, Bridge Ball, Cats In The Corner Chinese Soccer, Crab Soccer, Crazy Eights, Dice – 1000, Killer, Relay Card Game, Spoons and Finger Nail Painting.

Group C

Training of selected asans, Paranayam and recreational activities i.e. Surya Namaskar, Ujjai Pranayama, Auloma Viloma, padam asana, nauka asana, satu asana Corner Chinese Soccer, Crab Soccer, Crazy Eights, Dice – 1000, Killer, Relay will be given to group C.

Group D

No experimental treatment will be given to Control group.

Sampling

The present study deal with the maladaptive and distress behaviour of autistic children from Josola Vihar Delhi between the age group of 8 to 12 years of age. Twenty (20) samples will be selected through purposive random sampling technique and will be divided into four groups i.e. group A, group B, group C and Group D. Those subjects who imparted training in yogic activities will be in group A. Group B engaged in recreational activities. Those imparted training of yogic- recreational combine will be in group C. No experimental treatment will be given to Control group.

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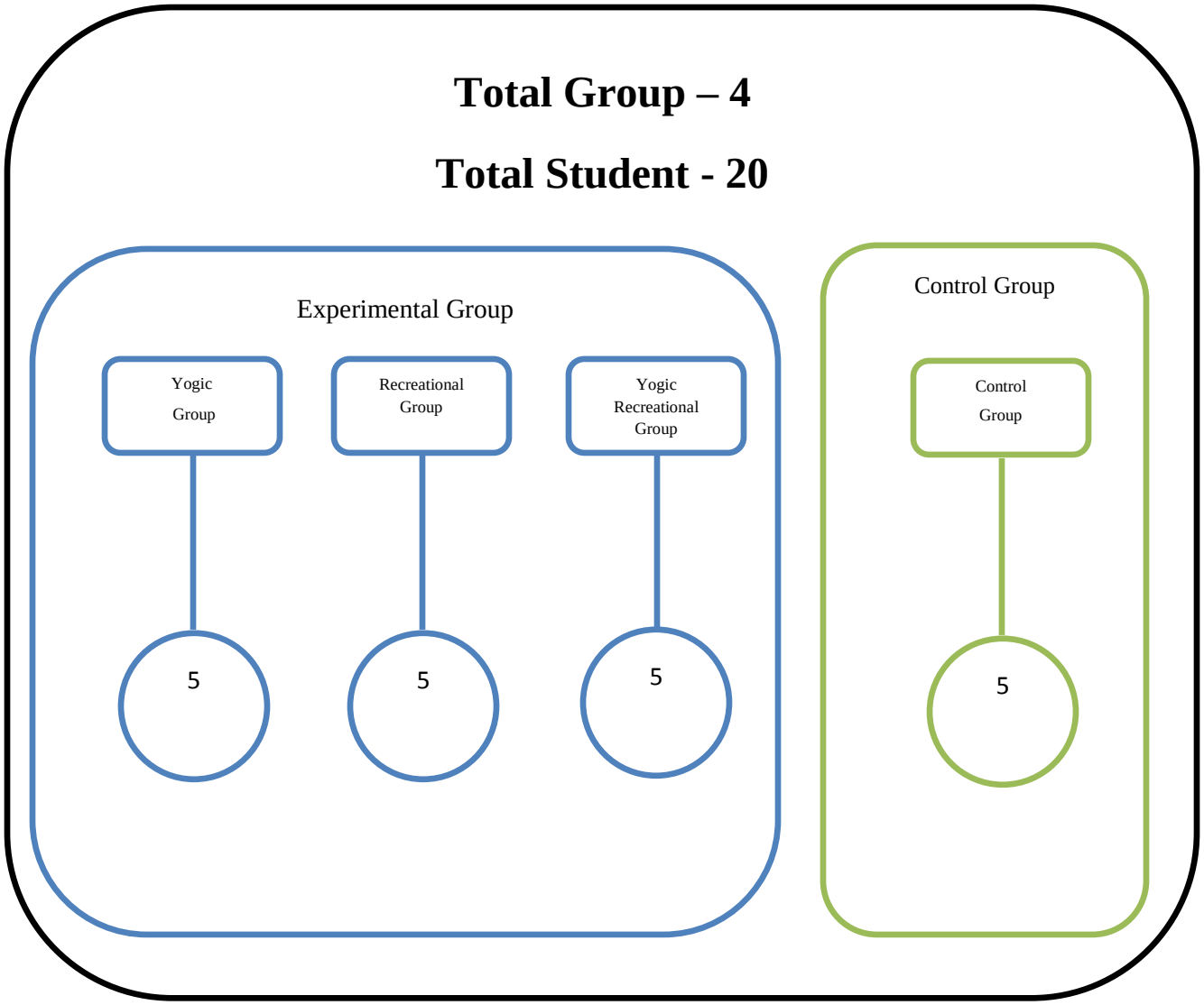
Total Group – 4
Total Student - 20
Experimental Group
Yogic Group
Recreational Group
Yogic Recreational Group
5
5
5
Control Group
Control Group
5

Tools

To measure maladaptive and distress behaviour of autistic children the investigator will develop a check list based on the previous researches (Robin, Fein, Baston, 1999 and Radhakrishan 2010).

Statistical techniques

Pearson product movement correlation coefficient will be used to know the association of yogic and recreational activities with distress and maladaptive behaviour of autistic children. As the investigation carries two dependent variables, to know the difference between pre and post experiment conditions MANOVA will be applied. To measure the contribution ratio regarding the observed effect of yogic, recreational and combinational activities regression analysis will be used.

Delimitation

The study will be delimited to the autistic children between the age group of 8-12 years, from Josala Vihar, Delhi. Test will be done on 15 autistic children.

Training of selected asana, pranayama and recreational activities will be given

Chapter Scheme

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